

Appl. No. 10/625,052  
Amdt. Dated Nov. 4, 2005  
Reply to Office Action of Aug. 4, 2005

**Amendments to the Specification:**

Please amend the specification as follows:

[0002] A wide variety of cover structures for portable electronic devices, particularly for phones, are available today. Cover structures for folding or flip phones are complicated since a hinge mechanism is necessary to pivotally connect first and second housings of the phone to allow movement between closed and open positions. [Fig. 5] FIG. 5 shows a structure for a flip phone disclosed in U.S. Pat. No. 5,761,300. Referring to this reference patent, a flip element 103, a rear housing portion 229 and a front housing portion 231 can be assembled together using a hinge mechanism. The flip element 103 includes a pair of hinge knuckles 203, 207, and is a one-piece integrally formed unit. [Fig. 6] FIG. 6 shows a structure of a flip 14 for a folding phone disclosed in U.S. Pat. No. 6,209,173[.], ~~wherein the~~ The flip 14 comprises a front cover portion 141 and a back cover portion 142. Each cover portion 141, 142 forms a ~~curve~~ curved portion 391, 392. When the cover portions ~~141, 142~~ 141, 142 are assembled, the ~~curve~~ curved portions 391, and 392 engage with each other to form a hinge tube 39 to encase a hinge mechanism. ~~However, referring to the first reference, the flip element 103 is difficult to form in different colors, each color being distinct and having regular region boundaries therebetween since the flip element 103 is a uniform, integral structure. The flip 14 of the second reference can be easily formed in different colors with the front cover portion 141 and the back cover portion 142 each being of a different color, and a distinct boundary being formed where the curve portions 391, 392 join to form the hinge tube 39. However, as the flip 14 rotates around the hinge mechanism, the hinge tube 39 can be easily split or broken under torque produced since the tube 39 is constituted of two separate curve portions 391 and 392.~~

[0002.1] However, as regards the first above reference, it is difficult to

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form the flip element 103 so that it has two or more different colors, with the colors being distinct and having clear boundaries therebetween. This is because the flip element 103 is a uniform, integral structure. Unlike in the first reference, the flip 14 of the second above reference can be easily formed in two different colors. That is, the front cover portion 141 and the back cover portion 142 can each be formed of a different color, with a distinct boundary being defined where the curved portions 391, 392 join to form the hinge tube 39. However, as the flip 14 rotates around the hinge mechanism, the hinge tube 39 can be easily split or broken under the torque produced, because the tube 39 is constituted of the two separate curved portions 391, 392.

[0006] A cover structure for a portable electronic device comprises a ~~back~~ front cover and a ~~front~~ back cover, wherein the ~~back~~ front cover forms a main joint portion, the ~~front~~ back cover forms a shell, the main joint portion has an arcuate wall, and a ~~cutout~~ recessed portion is formed on the arcuate wall. When assembling the ~~back~~ front and ~~front~~ back covers, a knuckle is formed by means of the shell engaging with the main joint portion on the ~~cutout~~ recessed portion thereof.

[0014] Referring now to the drawings in detail, FIG. 1 shows a flip cover 1 for a folding mobile phone (not shown). The flip cover 1 has a ~~back cover~~ front cover 10 and a ~~front cover~~ back cover 20 which join together to house electronic elements, such as an LCD display 13, an earpiece (not shown), and associated circuitry. The flip cover 1 forms a knuckle 12 for encasing a hinge mechanism 2. Combining the flip cover 1 with a main body (not shown) using the hinge mechanism 2 forms the folding mobile phone (~~not shown~~). The In the preferred embodiment, the knuckle 12 is of less has a width less than that of both the back front cover 10 and the front back cover 20, to allow easy assembly of the folding mobile phone in the preferred embodiment. The If desired, the knuckle 12 can be designed to [(be)] have a width equal to or broader

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greater than the width of both the ~~back cover~~ front cover 10 and the front cover ~~back cover~~ 20, if desired.

[0015] FIG 2 is a disassembled view of the flip cover 1 of FIG. 1. The ~~back cover~~ front cover 10 includes two sidewalls 111, a bottom wall 112, a rear wall 113, and a top wall 114. A main joint portion 120 extends from the top wall 114 of the ~~back cover~~ front cover 10. The main joint portion 120 is preferably in the form of a casing tube defining a circular channel 124 extending therethrough. The main joint portion 120, which includes an arcuate wall 121[[,]] and a first support neck 123, and a circular channel 124 defined by the arcuate wall 121 and the first support neck 123. The first support neck 123 supports the arcuate wall 121 and joins the arcuate wall 121 with the top wall 114. The arcuate wall 121 and the first support neck 123 cooperatively define the circular channel 124, which is for receiving the hinge mechanism 2. The first support neck 123 ~~supports the arcuate wall 121 and joins the arcuate wall 121 with the top wall 114.~~ The arcuate wall 121 forms a ~~cutout~~ recessed portion 1210 on its outer surface, and thus forms a protruding portion 1211 with a first edge 1212 adjacent between the cutout recessed portion 1210 and the protruding portion 1211. The ~~cutout~~ recessed portion 1210 defines two openings 125 therethrough and a groove 1221 therein, for passage of conductors. The two openings 125 are spaced apart a distance, and are adjacent a first edge 1212 of the protruding portion 1211. Walls 111 to 114 and the main joint portion 120 together define a first receiving space 115 therebetween. In the an upper space region of the receiving space 115[[,]] defined by the first support neck 123, two screw hole posts 126 and a rectangular post 127 extend forwardly from the inside of the bottom wall 112. Each screw hole post 126 defines a screw hole (not labeled) therein. It is understood that the main joint portion 120 may be designed [[as]] to have other desired shapes instead of the that of a casing tube[[,]]. Such other shapes may also includes include the arcuate wall 121.

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[0016] Referring to FIG. 3 together with FIG. 2, FIG. 3 shows the ~~front cover~~ back cover 20. The ~~front cover~~ back cover 20 includes two lateral walls 211, a front wall 212, an upper wall 214, and a lower wall 213. A mating shell 22 sweeps upwardly from the front wall 212 of the ~~front cover~~ back cover 20, ~~which and~~ includes a second support neck 221 and a ~~curve~~ curved plate 222. The ~~curve~~ curved plate 222 has an inner face 2220 and a second edge 2221, which can perfectly closely fit respectively with the ~~cutout~~ recessed portion 1210 and with the first edge 1212 of the arcuate wall 121 respectively. The walls 211 to 214 and the mating shell 22 define a second receiving space 215. Two bolt hole posts 226 are formed at the second support neck 221 of the ~~front cover~~ back cover 20, each defining a bolt hole (not labeled) through the ~~front cover~~ back cover 20. The bolt holes through the bolt hole posts 226 correspond in position with the screw holes through the two screw hole posts 126. A holding block 227 extends forwardly from the bottom of the second receiving space 215, ~~corresponding in position to the post 127~~ and is for fixing of the post 127 therein. Two projections 225 extend forwardly from the inside of the mating shell 22, ~~corresponding to~~ for being retained in the two openings 125 ~~and can be retained respectively in the openings 125~~. Two screws 30 and two caps 31 are available to fix the ~~front cover~~ back cover 20 ~~together with~~ to the back cover front cover 10.

[0017] Referring to FIG. 4 together with FIGS. 2[[,]] and 3, to assemble the flip cover 1, the ~~front cover~~ back cover 20 is fixed to the ~~back cover~~ front cover 10. The first and second receiving spaces 115, 215 form a housing receptacle to retain electronic elements, such as the LCD display 13, the earpiece (not shown) and associated circuitry. The mating shell 22 ~~matches the main joint portion 120~~ covers the recessed portion 1210 to form the knuckle 12. ~~Herein, in~~ In the knuckle 12, the first and second support necks 123, 221 ~~joint together,~~ closely abut each other, thus Thus the screw holes in the screw hole posts 126 align with the bolt holes in the bolt hole posts 226, and the post 127 is fixed by the

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holding block 227[.], ~~the curve~~ The curved plate 222 fits in the ~~entire~~ recessed portion 1210 of the arcuate wall 121, and the projections 225 are respectively retained in the openings 125[.]. ~~thus~~ Thus the inner face 2220 ~~thereof nestles up against~~ of the curved plate 222 abuts the ~~entire~~ recessed portion 1210, and with the second edge 2221 ~~thereof presses~~ pressing close to the first edge 1212 thereby forming a regular dividing line 3 in the knuckle 12. Then, ~~the assembly person screws an assembler extends~~ the screws 30 into through the bolt holes [[in]] of the bolt hole posts 226 and engages the screws 30 in the screw holes [[in]] of the screw hole posts 126 to thereby fix the back cover front cover 10 and the ~~front cover back cover~~ 20 together[.], ~~and uses the~~ The two caps 31 are used to respectively cover the heads of the screws 30 to protect the screws 30 from erosion or damage. Thus, the flip cover 1 is obtained. Combining the flip cover 1 with [a] the main body by way of the hinge mechanism 2 thus forms [a] the folding mobile phone.

[0018] The first edge 1212 of the main joint portion 120 can be designed as a perpendicular, a slanted, or a curved surface with respect to the ~~entire~~ recessed portion 1210, and the second edge 2221 of the mating shell 22 would correspondingly be designed as a perpendicular, a slanted, or a curved section. Thus, viewed from the side (along an axis of the circular channel 124), the junction of the first edge 1212 and second edge 2221 can be upstanding, slanted at an angle, or curved. Furthermore, a path along a top of the knuckle 12 defined by the first edge 1212 and second edge 2221 can be designed such that the dividing line 3 can be a straight line or follow a ~~non-straight bent~~ path (such as a wavy line, a sawtooth configuration, or any other configuration to satisfy stylistic considerations).

[0020] The flip cover 1 is durable and very difficult to break when rotating about the hinge mechanism 2 between closed and open positions of the folding mobile phone[.], ~~since~~ This is because the ~~back cover~~

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front cover 10 and the ~~front cover~~ back cover 20 are tightly fixed together as described above, with the knuckle 12 ~~[[is]]~~ being formed by way of the mating shell 22 ~~perfectly closely~~ fitting ~~and fixing~~ with the main joint portion 120 and being held in position thereat, and ~~since~~ because the main joint portion 120 is a single, integral unit which defines the channel 124 for retaining the hinge mechanism 2. The flip cover 1 can have the ~~back cover~~ front cover 10 of one color and the ~~front cover~~ back cover 20 of another color. Thus the flip cover 1 can be two-colored or multi-colored and yet retain a distinct color boundary ~~therebetween~~ between adjacent colors. The boundary is defined by ~~the joint bounds~~ adjoining extremities of the covers 10, 20, including the dividing line 3.